Message

From: Praskins, Wayne [Praskins.Wayne@epa.gov]
Sent: 3/3/2022 6:36:51 PM
To: 'Stoick, Paul T CIV USN NAVFAC SW SAN CA (USA)' [paul.t.stoick.civ@us.navy.mil]
CC: Janda, Danielle L CIV USN (USA) [danielle.l.janda.civ@us.navy.mil]; Robinson, Derek J CIV USN NAVFAC SW SAN CA (USA) [derek.j.robinson1.civ@us.navy.mil]; juanita.bacey@dtsc.ca.gov; Han, Terry@CDPH [terry.han@cdph.ca.gov]; Chesnutt, John [Chesnutt.John@epa.gov]; Mccray, Sean-Ryan CTR (USA) [sean-ryan.mccray.ctr@us.navy.mil]; 'amy.brownell@sfdph.org' [amy.brownell@sfdph.org]
Subject: RE: EPA comments on draft final Parcel C removal site evaluation work plan and Bldg 205 No Further Action

Paul –

I'm still not clear why Building 205 is not included in the planned Parcel C retesting.

According to a July 2017 Technical Memorandum ("TECHNICAL MEMORANDUM TO SUPPORT NO FURTHER ACTION FOR BUILDING 205, INCLUDING THE SUCTION CHANNELS AND DISCHARGE PIPING"), Tetra Tech EC completed two types of work at or near Building 205: 1) scanning of 12 utility boxes/electrical cabinets; and 2) collection and analysis of water and sediment samples from three locations (the "pump pit" and "discharge channel" in Building 205 and a "valve pit" in Building 204, as shown in Figure 1 in Attachment 2 in the Technical Memorandum). Based on the scans, six ceramic switches were removed and disposed.

I don't see how the inaccessibility of the subsurface piping and channels or the NFA determination (vs. a RURR) changes things. The decision to remove ceramic switches from only two of the 12 utility boxes was based on TTEC's scan results. The conclusion that there was no residual radiological contamination in the subsurface pits and channels was based, at least in part, on TTEC's water and sediment sampling.

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From: Praskins, Wayne
Sent: Wednesday, January 12, 2022 1:05 PM
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Subject: RE: EPA comments on draft final Parcel C removal site evaluation work plan and Bldg 205 No Further Action

Paul –

Thanks for your email and Amy, thanks for your input. EPA and the State are discussing the need for retesting Building 205 and expect to respond further soon.

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From: Brownell, Amy (DPH) <amy.brownell@sfdph.org>
Sent: Wednesday, January 5, 2022 12:41 PM
To: 'Stoick, Paul T CIV USN NAVFAC SW SAN CA (USA)' <paul.t.stoick.civ@us.navy.mil>; Praskins, Wayne <Praskins.Wayne@epa.gov>; Mccray, Sean-Ryan CTR (USA) <sean-ryan.mccray.ctr@us.navy.mil>
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Subject: RE: EPA comments on draft final Parcel C removal site evaluation work plan and Bldg 205 No Further Action

Paul

Please set up a time if you want to discuss further – but this is my recollection and based on a quick review of the No Further Action (NFA)

My interpretation is that the Navy's Technical Memorandum for NFA means NFA is requested for the reasons stated (see below). I know this may not be the correct wording but functionally a NFA removes the original rad impacted designation – the structure didn't need scanning? Isn't the inaccessibility to take samples tangential to the core reasoning for NFA.

The distinction is important because NFA means no restrictions are needed for the Bldg 205 area because – read below. NFA isn't dependent on scans – read below. It was a deliberate and important distinction. Navy please correct me if my recollection is faulty.

Conclusion: since Bldg 205 was the only area with NFA, it is not the same as all the buildings with RURRs and suspended RURRs. NFA is a different conceptual site model and approval pathway.

Related - I'm not finding the DTSC and EPA approvals of No Further Action for Bldg 205 – can Wayne and Nina send those to me?

Section 3.0 from the NFA is as follows

3.0 EVALUATION RESULTS

The DON is recommending "No Further Action" for Building 205 (Drydock 2 Pump House), including its components, the collector and suction channels, the pump pit, the discharge piping, and the discharge channel.

Based on the results of the gamma scan survey of the utility boxes and permanently mounted electrical cabinets within Building 205, a total of six ceramic switches were removed and disposed of as LLRW. The remaining boxes and cabinets do not have activity above the release criteria. Due to the inaccessibility of the Drydock 2 collector channel (and Drydock 3 collector channel), the suction channel between Drydock 2 and the Building 205 pump pit, and the suction channel between Drydock 3 and the Building 205 pump pit, no samples were collected from these areas. However, the wood decking in Drydock 2 (and Drydock 3) was removed and replaced with new reinforced concrete slab flooring in 1952 (DON 1954a,b). Therefore, any residual radiological contamination from ships that participated in atomic weapons testing prior to 1952, which might have lodged in the porous wood structures and been released later during dewatering operations, would have been removed when the flooring was replaced. Furthermore, the results of the Parcel F data gap investigations performed between February 2009 and February 2013 indicate that that the radioactivity in Parcel F sediment, including the sediment at Drydocks 2 and 3, is consistent with background (KCH 2016). Thus, if sediment is present within the collector channels at Drydocks 2 and 3, no further action is required in these areas.

Because the collector channel was designed with sand traps and grating to minimize sedimentation into the suction channel, any residual sediment would tend to be pushed from the collector channel through the suction channel, through the pumps, then through the discharge piping and the discharge channel and into the Bay during the surge flow when dewatering operations were performed. This surge flow occurred when the drydock was dewatered to allow workers to enter the drydock and place keel blocks to support the vessel during maintenance activities. The surge flow occurred again after the drydock had been flooded to allow entrance of the ship into the drydock to leave the ship dry and supported on keel blocks for performance of maintenance activities.

Each dewatering event involved the transfer of over 20 million gallons of water from the drydock through the collector channel, and through the suction channel and discharge piping and into the discharge channel in 2.5 hours. Assuming a minimum of one ship per year required maintenance between 1946 (start of OPERATIONS CROSSROADS) and 1952 (when the wood decking was replaced with a concrete floor), a total of 240 million gallons of water would have been transferred from the drydock through the collector channel, suction channel, and discharge piping and into the discharge channel. Assuming one ship per year required maintenance between 1953 and 1974

(when the DON closed HPNS), a total of 880 million gallons of water would have been transferred from the drydock through the collector channel, suction channel, and discharge piping and into the discharge channel.

No Cs-137, Pu-239, Ra-226, and Sr-90 activity was detected above the release criteria in both the aqueous and sediment samples collected from the Building 205 pump pit.

Because of the inaccessibility of the suction channel between Drydock 3 and the Building 205 pump pit, aqueous and sediment samples were instead collected from the Building 204 valve pit, which connects Building 204 to this suction channel. No Cs-137, Pu-239, Ra-226, and Sr-90 activity was detected above the release criteria in the aqueous and sediment samples collected from the Building 204 valve pit. Any potential future human exposure to potentially impacted suction channel piping and sediment is very unlikely due to the inaccessibility of the suction channel, which is located at least 36 feet below the existing ground surface.

It is unlikely that the non-porous cast iron discharge piping and the interior surface of the asphaltum-lined brick channel of the suction channel between the Drydock 2 collector channel and the Building 205 pump pit would have been radiologically impacted because any materials from ship decontamination efforts would have been transported rapidly during dewatering operations and deposited in the discharge channel, which is the most likely accumulation point for sediment. Any potential future human exposure to potentially impacted suction channel piping and sediment (if present at all) is very unlikely due to the inaccessibility of the suction channel. The aqueous and sediment samples from the Building 205 discharge channel were collected from within a portion of the original asphaltum-lined brick channel. No Cs-137, Pu-239, Ra-226, and Sr-90 activity was detected above the release criteria in the aqueous sample. The sediment sample had Cs-137 activity present at 0.117 pCi/g. Pu-239, Ra-226, and Sr-90 activity did not exceed the release criteria. The global background soil Cs-137 activity concentrations range from 0.3 to 3.0 pCi/g (Wallo et al. 1994). Additionally, mean concentrations of Cs-137 in drainage areas are typically three times that of non-drainage areas (Wallo et al. 1994). Thus, the activity concentration of 0.117 pCi/g may be attributed to global background soil Cs-137 activity concentrations, rather than being associated with decontamination efforts from ships that participated in atomic weapons testing.

The radiological remediation industry standard for determining both annual dose and risk is the RESRAD family of codes developed by Argonne National Laboratory (Yu et al. 2001). This software allows for input of numerous site-specific parameters to develop annual dose and/or risk

outputs based on exposure pathways, including external gamma, inhalation, plant ingestion, meat ingestion, milk ingestion, aquatic foods, drinking water, soil ingestion, and radon. Default parameters are automatically provided, but appropriate site-specific values may be input to best utilize the strength of the software for site-specific applications. If the maximum concentration of 0.117 pCi/g from the sample in the discharge channel is modeled using all default parameters,

and the discharge channel is assumed to be completely filled with soil/sediment at that activity concentration (worst case at 247 feet long and 8 feet wide for maximum area of 184 square meters), the RESRAD model results in a maximum annual dose of 0.200 millirem per year (mrem/y) and a risk of 3.266×10^{-6} to an adult resident living in direct contact with the soil/sediment. These values are sufficiently less than the U.S. Environmental Protection Agency risk release limit for radiological concerns of 3×10^{-4} (nominally 12 mrem/y) identified in the Office of Solid Waste and Emergency Response (OSWER) directive 9200.4-18, Establishment of Clean Up Levels for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Sites with Radioactive Contamination (EPA 1997) and OSWER directive 9285.6-20, Distribution of the Radiation Risk Assessment at CERCLA Sites: Q&A. June 13 (EPA 2014). The RESRAD data are provided in Attachment 3.

It is unlikely that the interior surface of the first 193 feet of the brick discharge channel would have been radiologically impacted due to the placement of the asphaltum waterproof lining. Similar to the cast iron discharge piping and the asphaltum-lined brick channel of the suction channel, it is also unlikely that this portion of the brick discharge channel would have been radiologically impacted, because any materials from ship decontamination efforts would have been transported rapidly during dewatering operations.

With the 54 feet of the discharge channel closest to the Bay replaced with a new 8-foot-insidediameter concrete square discharge channel in 1949, any residual radiological contamination from ships that participated in atomic weapons testing, which might have been present in that portion of the discharge channel, would also have been removed.

All but 8 of the 79 target and support ships that had returned to HPNS following OPERATIONS CROSSROADs had been decontaminated by December 1947. Per the HRA, after 1948, no mention of OPERATION CROSSROADS ships, other than the ex-INDEPENDENCE, is found in available historical records (NAVSEA 2004). With 90 percent of the ships decontaminated by December 1947 and the 54 feet of the discharge channel closest to the Bay replaced with a new concrete channel in 1949, any radiological impacts to the interior portion of the concrete channel would have been negligible.

Based on the investigations, surveys, and data presented herein, Building 205 and its appurtenant structures present no radiological threat to human health and the environment. The DON is recommending "No Further Action" for Building 205, including the suction channel between Drydock 2 and the Building 205 pump pit, pump pit, discharge piping, discharge channel along with the Drydock 2 collector channel, the suction channel between Drydock 3 and the Building 205 pump pit, and the intake channel into Building 204, as shown on Figure 1-3.

sincerely,

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REACH -for- Results, Equity, and Accountability for Community Health

From: Stoick, Paul T CIV USN NAVFAC SW SAN CA (USA) <paul.t.stoick.civ@us.navy.mil>
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Subject: RE: EPA comments on draft final Parcel C removal site evaluation work plan

Wayne/Sean-Ryan,

I recently looked into this to figure out why it wasn't included in the retesting effort. Building 205 is impacted due to subsurface piping related to the pump and associated collector, suction and discharge channels. TTEC did not include scanning these as it is inaccessible so No Further Action was proposed. Because the subsurface piping is still inaccessible, it wasn't included in the retesting effort.

V/r,
Paul

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Subject: [Non-DoD Source] RE: EPA comments on draft final Parcel C removal site evaluation work plan

Sean-Ryan –

One of EPA's comments on the draft final Parcel C retesting plan was:

> **EPA Comment #2.** In a comment on Section 1 in the draft Work Plan, EPA sought clarification on plans for several buildings located on Parcel C, including Building 205. The 2004 HPNS Historical Radiological Assessment lists Building 205 in Parcel C as radiologically impacted but a radiological investigation of this building is not included in the planned scope of work. Please clarify whether a radiological investigation of this building has been completed or, if not, when an investigation is planned.

I've since learned that TTEC completed radiological investigation work at and near the building ("FINAL CONSTRUCTION SUMMARY REPORT," June 2017" and "FINAL TECHNICAL MEMORANDUM TO SUPPORT NO FURTHER ACTION FOR BUILDING 205, INCLUDING THE SUCTION CHANNELS AND DISCHARGE PIPING," July 2017). Why isn't Building 205 included in the retesting plan?

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Subject: EPA comments on draft final Parcel C removal site evaluation work plan

Sean-Ryan –

Please see attached EPA comments on the draft final Parcel C workplan. The comments address many of the same issues, as yet unresolved, we've raised on the Parcel B plan. I look forward to tomorrow's discussion.

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